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L1            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  PERMETHRIN/CN
L2           89 SEA FILE=REGISTRY ABB=ON  PLU=ON  PERMETHRIN/BI
L3            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  IMIDACLOPRID/CN
L4           30 SEA FILE=REGISTRY ABB=ON  PLU=ON  IMIDACLOPRID/BI
L5              SEL  PLU=ON  L1 1- CHEM :       65 TERMS
L6         8965 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L5
L7        11291 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L6 OR ?PERMETHRIN? OR L2
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L9        15220 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L8
L10       15227 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L9 OR ?IMIDACLOPRID? OR L4
L12          41 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L7(L)L10
L13          37 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L12 AND (?PEST? OR ?AGROCHEM?
                OR ?INSECT? OR ?ACARID? OR PARASIT?)


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L13  ANSWER 1 OF 37  HCAPLUS  COPYRIGHT 2001 ACS
ACCESSION NUMBER:        2001:35633  HCAPLUS
TITLE:                   Effect of imidacloprid on incidence of Tomato yellow
                         leaf curl virus
AUTHOR(S):               Ahmed, N. E.; Kanan, H. O.; Sugimoto, Y.; Ma, Y. Q.;
                         Inanaga, S.
CORPORATE SOURCE:        Arid Land Research Center, Tottori University,
                         Tottori, 680-0001, Japan
SOURCE:                  Plant Dis. (2001), 85(1), 84-87
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CODEN: PLDIDE; ISSN: 0191-2917
PUBLISHER: American Phytopathological Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB **Confidor**, an **imidacloprid insecticide**, was used in two applications at four rates (47.6, 71.4, 95.2, and 119 g a.i./ha) for indirectly controlling Tomato yellow leaf curl virus (TYLCV) in field plantings of tomato. This spray regimen was compared with std. applications of **cypermethrins** at 10- to 15-day intervals throughout the growing season. In three field trials, a combination of integrated **pest** management (IPM) practices and two applications of **Confidor** at the two highest rates immediately after planting and 6 wk later, protected tomato plants against the disease until 12 wk after sowing. All rates of **Confidor** reduced disease incidence compared with std. chem. control applied in an integrated strategy, and quant. efficacy increased with increase of **insecticide** rate. In the three seasons, the mean incidence of TYLCV 12 wk after sowing was 42.7% in plots not adopting IPM compared with 15.7% in those that did. Disease incidence was reduced by **Confidor** treatments to 2.2 to 17%. **Confidor**-treated plots consistently had higher yields than control plots, and the yields decreased with the decrease in the rate of **Confidor** application. **Confidor** offers several advantages over std. applications of **cypermethrins** to control TYLCV. When applied immediately after planting, its long-lasting systemic activity protected the crop against the disease during early stages of growth. In addn., it reduced the no. of sprays and increased tomato yield.
REFERENCE COUNT: 26
REFERENCE(S): (3) Cahill, M; Bull Ent Res 1996, V86, P343 HCAPLUS
(7) Elbert, A; Imidacloprid, a new systemic insecticide Pflanzenschutz-Nachr Bayer 1991, V44, P113 HCAPLUS
(12) Gourmet, C; Plant Dis 1996, V80, P136 HCAPLUS
(20) Rubinstein, G; J Econ Entomol 1999, V92, P658 HCAPLUS
(26) Yassin, A; Exp Agric 1975, V11, P161 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 2 OF 37 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2000:844599 HCAPLUS
DOCUMENT NUMBER: 134:111613
TITLE: Determination of toxicity of four **insecticides** on green peach aphid, Myzus persicae (Sulzer)
AUTHOR(S): Zhang, Su-fang; Wang, Shao-li; Gao, Lian-hai
CORPORATE SOURCE: College of Bioengneering, Henan Agricultural University, Zhengzhou, 450002, Peop. Rep. China
SOURCE: Henan Nongye Daxue Xuebao (2000), 34(1), 94-96
CODEN: HNDAEJ; ISSN: 1000-2340
PUBLISHER: Henan Nongye Daxue Xuebao Bianjibu
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
AB The toxicity of four kinds of **insecticides** to green peach aphid Myzus persicae was studied. The LD50 and index of relative toxicity of the aphid to these **pesticides** were different. Among these **insecticides**, **imidacloprid** offered the least LD50 and the largest index of relative toxicity, the aphid was most sensitive to this **pesticide**, next come, alpha-**cypermethrin** and fenvalerate, acephate offered the largest LD50 and the least index of relative toxicity, the aphid was the least sensitive to this **pesticide**. Green aphids had greater sensitivity than the red ones to all **insecticides**.

L13 ANSWER 3 OF 37 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2000:785946 HCAPLUS
DOCUMENT NUMBER: 133:306722
TITLE: Hyperosmotic **agrochemicals** and chemical

products formulated by using liquid or powder azone mixture
INVENTOR(S): Ma, Xilin; Qian, Yongkang
PATENT ASSIGNEE(S): Shifang New Technology Inst., Beijing, Peop. Rep. China
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 9 pp. CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1245637	A	20000301	CN 1998-117520	19980820

AB The invention relates to prparation of **agrochem**. synergists and chem. product additives by using azone and/or azone-like compds., as well as their application in **agrochem**. and chem. formulations. The **agrochem**. synergists or chem. product additives can be prepd. by (1) mixing two or more liq. azone-like copmounds, or (2) mixing liq. azone or azone-like compd. with liq. **pesticide** adjuvants or surfactants, or (3) mixing liq. azone or azone-like compd. with **pesticide** adjuvants or surfactants and filler powder. The liq. azone or composite azone powder can be directly added to the **agrochem**. or various chem. products. The **agrochems**. can be phoxim, methamidophos, parathion (parathion-methyl), dichlorvos, trichlorfon, monocrotophos, dimethoate (omethoate), chlorpyrifos, isocarbophos, quinalphos, malathion, fenthion, carbaryl, fenobucarb, carbofuran, isoprocarb, pirimicarb, methomyl, thiodicarb, tetramethrin, allethrin, **permethrin**, fenpropathrin, fenvalerate, **cypermethrin** (.alpha.-**cypermethrin** or .beta.-**cypermethrin**), deltamethrin, brofluthrin, cyfluthrin, **imidacloprid**, chlorobenzuron, diflubenzuron, pyridaben, dicofol, diflubenzuron, clofentezine, fenbutatin oxide, chlorfenzapyr, acrinathrin, tralomethrin, fipronil, propargite, acetamiprid, hexythiazox, Bacillus thuringiensis, matrine, bromadiolone, coumatetralyl, warfarin and diphacinone. The **agrochems**. can be Cu2O, chlorothalonil, mancozeb, carbendazim, thiram, chlorothalonil, procymidone, thiophanate-Me, metalaxyl, jinggangmycin, dimethachlon, tricyclazole, triadimefon, iprodione, dimethomorph, fenarimol and polyoxin. The **agrochems**. can be gibberellic acid, mepiquat chloride, paclobutrazol, ethephon, indoleacetic acid, .alpha.-naphthaleneacetic acid. The **agrochems**. can be diclofop-Me, propanil, napropamide, alachlor, acetochlor, butachlor, metolachlor, chlortoluron, isoproturon, chlorsulfuron, metsulfuron-Me, pyrazosulfuron-Et, benazolin-Et, fenoxaprop-Et, anilofos, quinclorac, bentazon, acifluorfen sodium, oxadiazon, thifensulfuron-Me, bensulfuron-Me, cinmethylin, haloxyfop, quizalofop (quizalofop-p-ethyl), fluazifop-Bu (fluazifop-p-butyl), paraquat, glyphosate, or atrazine. The chem. product additives can also be applied in chem. products, such as lubricating oil, inks, household detergents, industrial detergents, adhesives etc.

L13 ANSWER 4 OF 37 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2000:683443 HCAPLUS
DOCUMENT NUMBER: 133:330889
TITLE: **Insecticide** resistance and cross-resistance in the house fly (Diptera: Muscidae)
AUTHOR(S): Liu, Nannan; Yue, Xin
CORPORATE SOURCE: Department of Entomology and Plant Pathology, Auburn University, Auburn, AL, 36849-5413, USA
SOURCE: J. Econ. Entomol. (2000), 93(4), 1269-1275 CODEN: JEENAI; ISSN: 0022-0493
PUBLISHER: Entomological Society of America
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A house fly strain, ALHF, was collected from a poultry farm in Alabama

after a control failure with **permethrin**, and further selected in the lab. with **permethrin** for five generations. The level of resistance to **permethrin** in ALHF was increased rapidly from an initial 260-fold to 1,800-fold after selection. Incomplete suppression of **permethrin** resistance by piperonyl butoxide (PBO) and S,S,S,-tributylphosphorotrithioate (DEF) reveals that P 450 monooxygenase- and hydrolase-mediated detoxication, and one or more addnl. mechanisms are involved in resistance to **permethrin**. The ALHF strain showed a great ability to develop resistance or cross-resistance to different **insecticides** within and outside the pyrethroid group including some relatively new **insecticides**. Resistance to beta-**cypermethrin**, **cypermethrin**, deltamethrin, and propoxur (2,400-4,200-, 10,000-, and >290-fold, resp., compared with a susceptible strain, aabys) in ALHF house flies was partially or mostly suppressed by PBO and DEF, indicating that P 450 monooxygenases and hydrolases are involved in resistance to these **insecticides**. Partial redn. in resistance with PBO and DEF implies that multiresistance mechanisms are responsible for resistance. Fifteen- and more than fourfold resistance and cross-resistance to chlorpyrifos and **imidacloprid**, resp., were not effected by PBO or DEF, indicating that P 450 monooxygenases and hydrolases are not involved in resistance to these two **insecticides**. Forty-nine-fold cross-resistance to fipronil was mostly suppressed by PBO and DEF, revealing that monooxygenases are a major mechanism of cross-resistance to fipronil. Multiresistance mechanisms in the ALHF house fly strain, however, do not confer cross-resistance to spinosad, a novel **insecticide** derived from the bacterium Saccharopolyspora spinosa. Thus, we propose that spinosad be used as a potential **insecticide** against house fly **pests**, esp. resistant flies.

REFERENCE COUNT: 48
REFERENCE(S):
(2) Bourguet, D; J Econ Entomol 1996, V89, P1060 HCAPLUS
(3) Buckingham, S; Neurosci Lett 1994, V181, P137 HCAPLUS
(5) Cole, L; Life Sci 1995, V56, P757 HCAPLUS
(6) Cole, L; Pestic Biochem Physiol 1993, V46, P47 HCAPLUS
(7) Colliot, F; Proceedings, Brighton Crop Protection Conference:Pests and Diseases 1992, P29 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 5 OF 37 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2000:596978 HCAPLUS
DOCUMENT NUMBER: 133:160871
TITLE: Efficient **cypermethrin-imidacloprid insecticidal** emulsion
INVENTOR(S): Lu, Yucheng
PATENT ASSIGNEE(S): Peop. Rep. China
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 3 pp.
CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1234181	A	19991110	CN 1999-112018	19990108

AB The **cypermethrin-imidacloprid** emulsion comprises high efficiency **cypermethrin** 0.5-9.5, **imidacloprid** 0.5-9.5, solvent (benzene and xylene etc.) 60-84, solubilizer 5-10, emulsifying agent 5-10 and penetrating agent 5-10%; and preferably high efficiency **cypermethrin** 1.5, **imidacloprid** 1.5, solvent 70, solubilizer 10, emulsifying agent 9 and penetrating agent 8%. The penetrating agent is selected from methanol, ethanol or DMF. The emulsion is a broad-spectrum **insecticide** and highly efficient and

inexpensive.
IT **52315-07-8, Cypermethrin 138261-41-3, Imidacloprid**
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(efficient **cypermethrin-imidacloprid** synergistic **insecticide** emulsion)
IT **287480-87-9P, Cypermethrin-imidacloprid** mixt.
RL: AGR (Agricultural use); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation); USES (Uses)
(efficient **cypermethrin-imidacloprid** synergistic **insecticide** emulsion)

L13 ANSWER 6 OF 37 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2000:577533 HCAPLUS
DOCUMENT NUMBER: 133:146298
TITLE: **Insecticide** containing **imidacloprid** and **cypermethrin**
INVENTOR(S): Zhang, Tianliang; Zhang, Yi
PATENT ASSIGNEE(S): Peop. Rep. China
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 4 pp.
CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1236547	A	19991201	CN 1998-110229	19980521

AB The **insecticidal** emulsion comprises **imidacloprid**/ **cypermethrin** 3-10%, solvent 60-80%, and emulsifier 10-30%. The **insecticide** is inexpensive, broad spectrum and effective in control cotton aphid, bollworm, cabbage caterpillar and plant hopper.
IT **52315-07-8, Cypermethrin 138261-41-3, Imidacloprid**
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(**imidacloprid/cypermethrin**-contg. **insecticide**)
IT **287480-87-9P, Imidacloprid-cypermethrin** mixt.
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation); USES (Uses)
(**imidacloprid/cypermethrin**-contg. **insecticide**)

L13 ANSWER 7 OF 37 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2000:497520 HCAPLUS
DOCUMENT NUMBER: 133:204160
TITLE: Effect of **insecticides** on the diamondback moth (Lepidoptera: Plutellidae) and its **parasitoid** Diadegma insulare (Hymenoptera: Ichneumonidae)
AUTHOR(S): Hill, Travis A.; Foster, Rick E.
CORPORATE SOURCE: Department of Entomology, Purdue University, West Lafayette, IN, 47907, USA
SOURCE: J. Econ. Entomol. (2000), 93(3), 763-768
CODEN: JEENAI; ISSN: 0022-0493
PUBLISHER: Entomological Society of America
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Studies were conducted to evaluate the toxicity of **insecticides** to adult Diadegma insulare (Cresson) and its host the diamondback moth, Plutella xylostella (L.). Leaf-dip and direct-dip bioassays for diamondback moth larvae and residual bioassays for adults of diamondback moth and D. insulare were used to assess mortalities. Larval mortalities at field rates were significantly higher with carbaryl, **permethrin**

, spinosad, and tebufenozide when compared with Bacillus thuringiensis, or **imidacloprid** in the larval-dip bioassay 72 h after treatment. In the leaf-dip and residual bioassays, both **permethrin** and spinosad caused 100% mortalities to diamondback moth larvae and adults, resp., 72 h after treatment. Of all the materials tested, only B. thuringiensis and tebufenozide were not toxic to D. insulare 24 h after treatment. Spinosad was not toxic to D. insulare 30 min after treatment. However, 100% mortality was obsd. 8 h after treatment.

REFERENCE COUNT: 19
REFERENCE(S):
(4) Fast, P; J Invertebr Pathol 1971, V18, P135 HCAPLUS
(5) Furlong, M; Pestic Sci 1994, V41, P359 HCAPLUS
(8) Hoy, C; Pestic Sci 1993, V38, P335 HCAPLUS
(9) Idris, A; J Econ Entomol 1993, V86, P529 HCAPLUS
(10) Lin, H; Environ Entomol 1993, V22, P1096 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 8 OF 37 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2000:492265 HCAPLUS
DOCUMENT NUMBER: 133:70214
TITLE: Composite wettable powder with chlorobenzuron
INVENTOR(S): Ma, Yue
PATENT ASSIGNEE(S): Peop. Rep. China
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 6 pp.
CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1233394	A	19991103	CN 1999-105769	19990416

AB The wettable powder is composed of chlorobenzuron 10-50, .alpha.-**cypermethrin** 0-5, adjuvant 3-10%, and addnl. filler, prepd. by grinding into 325 mesh, and mixing. The .alpha.-**cypermethrin** can be substituted by one of esfenvalerate, .lambda.-cyhalothrin, cyfluthrin, bifenthrin, brofluthrin, flucythrinate, abamectin, **imidacloprid** etc. The adjuvant contg. wetting agent and dispersing agent is selected from one or more of Na lauryl sulfate, neopelex, Na lignosulfonate, Ca lignosulfonate, Detergent, and Dispersing agent MF, and the filler selected from one or more of clay, bentonite, diatomite, soap stone powder, hydrated silica etc. The wettable is a high-efficiency, low-toxicity and nuisanceless **pesticide**, and can prevent and control many **insects**.

L13 ANSWER 9 OF 37 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2000:389247 HCAPLUS
DOCUMENT NUMBER: 133:1757
TITLE: Manufacture of abamectin-containing **insecticidal** and acaricidal microemulsifier
INVENTOR(S): Tang, Rui
PATENT ASSIGNEE(S): Peop. Rep. China
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 7 pp.
CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1208559	A	19990224	CN 1998-103240	19980717

AB The **insecticidal** and acaricidal microemulsifier comprises abamectin 0.01-5, agro-emulsifier No.700 5-30%, Ningru-emulsifier 0203B 5-30%, solvent 5-30%, solubilizer 5-20%, (can also include) pyrethrins

0.8-1.5%, or carbamates 3-10%, or shachongdan 10-40, or **imidacloprid** 5-10%, and water to 100%. The pyrethrins can be selected from **cypermethrin**, fenvalerate, .lambda.-cyhalothrin, fenpropathrin, or deltamethrin; the carbamates from pirimicarb, carbaryl, or metacrate; the solvent from toluene, xylene, DMF, cycloethane, or DMSO; and the solubilizer from n-butanol, isopropanol, methanol, ethanol, n-octanol, ethanediol, glycerin, or polyethylene glycol. The process comprises mixing and stirring at 20-60 rpm for 20 min.

L13 ANSWER 10 OF 37 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2000:315146 HCAPLUS
DOCUMENT NUMBER: 133:131155
TITLE: Studies on effective **insecticides** for controlling Aphis citricola
AUTHOR(S): Jiang, Xingyin; Wang, Kaiyun; Yi, Meiqin
CORPORATE SOURCE: Dept. of Plant Protection, Shandong Agricultural University, Taian, 271018, Peop. Rep. China
SOURCE: Nongyao (2000), 39(4), 26-27
CODEN: NONGFP; ISSN: 1006-0413
PUBLISHER: Nongyao Bianjibu
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
AB The **insecticidal** activity of 20% methomyl emulsifiable conc., 10% **imidacloprid** wettable powder, 5% **cypermethrin** emulsifiable conc., 40% folimat emulsifiable conc. and a new synergistic yabisha (methomyl) emulsifiable conc. against Aphis citricola were tested at different temps. The results showed that the contact toxicity of these **insecticides** varied with different temps. The temp. effects on **insecticidal** activity of methomyl was low (1.8 times, 32.degree./11.degree.), and that of **imidacloprid** was high (46.8 times). The new synergistic yabisha (methomyl) emulsifiable conc. is effective in control of Aphis citricola.

L13 ANSWER 11 OF 37 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2000:307033 HCAPLUS
DOCUMENT NUMBER: 133:70164
TITLE: Efficacy of neem formulations compared to chemical **insecticides** against hoppers and leaf webber
AUTHOR(S): Singh, Gajendra
CORPORATE SOURCE: G.B. Pant University of Agriculture and Technology, Pantnagar, 263145, India
SOURCE: Acta Hortic. (2000), 509(Vol. 2, Proceedings of the International Symposium on Mango), 745-749
CODEN: AHORA2; ISSN: 0567-7572
PUBLISHER: International Society for Horticultural Science
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Neem formulations consisting azadirachtin are safer, cheaper and environment safe. Presently, several of these compds. have been registered in India and are available in the market. Studies conducted against two major **pests** of mango, the hoppers and leaf webber Orthaga euadrusalis indicted that freshly prepd. 4% neem seed kernel ext. (NSK) and 0.2% nimbicidine and deltamethrin gave significant redn. in hopper population (16 and 15.5 hopper per 5 panicles as compared to control (47.6 hopper per 5 panicles). These were at par with **cypermethrin** (0.0025%) and **imidacloprid** (0.002%) and monocrotophos (0.05%). Population of pollinators was not affected. NSK at 4% effectively reduced hopper population upto 50% even after 7 days of spray, which was comparable to deltamethrin and **cypermethrin** and better than quinalphos. Against leaf webber, Nimbicidine 0.2% and Nemactine 0.4% were better than carbaryl 0.1% and somewhat at par with endosulfan (0.07%) and **imidacloprid** (0.02%). Neem formulations such as Rakshak (0.2%), Neem gourd (0.4%) were inferior to the above and vangourd (0.4%) was the most inferior to the 4th instar larvae.
REFERENCE COUNT: 4
REFERENCE(S): (1) Dakshinamurthi, A; Pesticide 1984, V18(5), P13

(2) Singh, G; Indian J Entomology 1981, V43, P318
(3) Singh, G; Indian J Hort 1974, V31, P283
(4) Singh, G; Walker Abstracts National Symposium on mango Production and Export held at CISH 1998

L13 ANSWER 12 OF 37 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2000:283218 HCAPLUS
DOCUMENT NUMBER: 133:27639
TITLE: Evaluation of certain **insecticides** and neem against cereal aphids on barley
AUTHOR(S): Singh, Vidya Sagar; Venkateswarlu, N. C.
CORPORATE SOURCE: Division of Entomology, Indian Agricultural Research Institute, New Delhi, 110012, India
SOURCE: Shashpa (2000), 7(1), 67-75
CODEN: SHASF2; ISSN: 0971-4979
PUBLISHER: Shaspa Publishers
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Evaluation of **insecticides** viz., **imidacloprid** (70 WS) as seed treatment and sprays of **cypermethrin**, alphamethrin and fenvalerate, Neem Gold, ethanolic and methanolic ext. of neem against 3 cereal aphids viz., Rhopalosiphum maidis (Fitch), Rhopalosiphum padi (L.) and Macrosiphum miscanthi avenae Takahashi on barley revealed that **imidacloprid** seed treatment used alone and in combination with fungicides viz., thiram, carbendazim and carboxin had no adverse effect on germination and remained effective for = 100 days and kept the plants free from aphids throughout the crop season. It was also compatible with the 3 fungicides. Grain yield increased considerably over untreated check with **imidacloprid** treatment. Neem formulations were not as effective as synthetic pyrethroids and seed treatment with **imidacloprid**.
REFERENCE COUNT: 11
REFERENCE(S): (6) Pike, K; J econ Ent 1993, V86(2), P586 HCAPLUS
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(10) Singh, V; Proc Nat Acad Sci, India (B) 1976, V46, P231 HCAPLUS
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ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 13 OF 37 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2000:256387 HCAPLUS
DOCUMENT NUMBER: 133:1732
TITLE: Further studies on the effects of **insecticides** on aphid vector numbers and spread of cucumber mosaic virus in narrow-leafed lupins (Lupinus angustifolius)
AUTHOR(S): Thackray, D. J.; Jones, R. A. C.; Bwye, A. M.; Coutts, B. A.
CORPORATE SOURCE: Bentley Delivery Centre, Agriculture Western Australia, Bentley, 6983, Australia
SOURCE: Crop Prot. (2000), 19(2), 121-139
CODEN: CRPTD6; ISSN: 0261-2194
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Narrow-leafed lupin was sown in 5 field expts. over 3 yr to investigate the effects of applying **imidacloprid**, alpha-**cypermethrin**, triazamate and methamidophos on aphid vector nos., spread of cucumber mosaic virus (CMV), resulting yield losses and CMV transmission to seed. Of the colonizing aphid species, Acyrthosiphon kondoi and Aphis craccivora were most effectively controlled by alpha-**cypermethrin** and Myzus persicae by **imidacloprid**. Methamidophos and triazamate had similar effects on colonizing aphid nos. to those of alpha-**cypermethrin**. In one expt., > 82% of the CMV vector M. persicae were **insecticide** resistant (R1 or R2-E4 esterase resistant

types). In two expts., nos. of colonizing aphids were greater in plots in which CMV was spreading from seed-infected plants, than in plots where healthy seed had been sown. Visual assessment of plants with CMV symptoms underestd. actual incidence measured by ELISA tests, more than three-fold. Alpha-**cypermethrin** applied at 25 g a.i./ha decreased CMV incidence by up to 62%, but **imidacloprid**, methamidophos and triazamate did not significantly diminish it. Increasing incidences of current-season CMV-infected plants were pos. correlated with the magnitude of yield losses and extent of CMV transmission through harvested seed. Direct aphid feeding damage did not influence grain yield. However, application of alpha-**cypermethrin** to control the aphid vectors of CMV in plots sown with infected seed increased yield by up to 60%, but did not give consistent enough control to be recommended for general use. Sowing healthy seed and using recommended integrated cultural management practices that minimize CMV spread should remain the mainstays of successful CMV management in lupins.

REFERENCE COUNT: 59

REFERENCE(S):
(11) Bwye, A; Aust J Exp Agric 1997, V37, P93 HCAPLUS
(15) De Proft, M; Med Fac Landbouww Rijksuniv Gent 1991, V56, P1181 HCAPLUS
(16) Devonshire, A; Bull Entomol Res 1986, V76, P97 HCAPLUS
(18) Dewar, A; Proceedings of the 1988 Brighton Crop Protection Conference: Pests and Diseases 1988, P477 HCAPLUS
(19) Dewar, A; Proceedings of the 1994 Brighton Crop Protection Conference: Pests and Diseases 1994, P407 HCAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 14 OF 37 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2000:247804 HCAPLUS
DOCUMENT NUMBER: 132:247452
TITLE: **Insecticide** containing light diesel oil for plant protection
INVENTOR(S): Wang, Yuwan; Dai, Xiaoxi; Shao, Yujie; Pan, Zhende
PATENT ASSIGNEE(S): Peop. Rep. China
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 6 pp.
CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1192855	A	19980916	CN 1998-101715	19980423

AB The **insecticide** comprises diesel oil 3-7%, **agrochem.** 0.05-4%, emulsifier 3-50%, penetrating agent 0-5%, and addnl. solvent. The diesel oil is a light diesel oil (fraction range: 200-380.degree.). The **agrochem.** include avermectin, liuyangmycin, organophosphorus **pesticides**, carbamates, synthetic pyrethroid, **imidacloprid**, amitraz, and Sn triazole. The organophosphorus **pesticides** is selected from chlorpyrifos, methylchlorpyrifos, isocarbophos, and fenthion; the synthetic pyrethroid from deltamethrin, **cypermethrin**, cyhalothrin, and fenvalerate; and the carbamates from carbosulfan and methomyl. The emulsifier is selected from OP-10, OP-21, OP-0203B, and Tween-80; the penetrant from JFC; and the solvent from xylene, ethanol, isopropanol, and acetone. The process comprises dissolving **agrochem.** in solvent, adding emulsifier, stirring, adding diesel oil, penetrant and the rest solvent, stirring to obtain the product.

L13 ANSWER 15 OF 37 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2000:144511 HCAPLUS
DOCUMENT NUMBER: 132:148061
TITLE: **Insecticidal** polymers prepd. by dissolving

insecticides in monomers.
INVENTOR(S): Liebert, Rebecca B.; Hetzer, Christine B.
PATENT ASSIGNEE(S): Nova Chemicals Inc., USA
SOURCE: Eur. Pat. Appl., 5 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 981956	A2	20000301	EP 1999-306373	19990812
EP 981956	A3	20000830		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 6080796	A	20000627	US 1998-136220	19980819

PRIORITY APPLN. INFO.: US 1998-136220 19980819
AB **Insecticides**, and particularly termiticides, may be dissolved in monomers polymd. to form foamable polymers, such as polystyrene. The resulting monomer and **insecticide** may then be polymd. in a conventional manner and either impregnated with a blowing agent or expanded using an extrusion process to produce polymeric foam having **insecticidal** properties. The polymer may also contain a flame retardant. Such polymers and the foam made therefrom may be used in the construction industry, particularly where **insect** infestation is a concern. Suitable **insecticides** are, for example, **imidacloprid**, **cypermethrin** and **permethrin**.

L13 ANSWER 16 OF 37 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2000:144510 HCAPLUS
DOCUMENT NUMBER: 132:148060
TITLE: Impregnating polymer beads with **insecticide**
INVENTOR(S): Liebert, Rebecca B.; Hetzer, Christine B.
PATENT ASSIGNEE(S): Nova Chemicals Inc., USA
SOURCE: Eur. Pat. Appl., 5 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 981955	A2	20000301	EP 1999-306300	19990810
EP 981955	A3	20000823		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 6033731	A	20000307	US 1998-136243	19980819

PRIORITY APPLN. INFO.: US 1998-136243 19980819
AB Polymeric beads made by a suspension or an emulsion process may be concurrently impregnated with blowing agent, an **insecticide** and a flame retardant, if required. The resulting bead is then washed and dried and then may be used for making a foam structure such as a sheet. The resulting foam sheet may be used in the construction industry, particularly where there is a concern of **insect** infestation. Suitable **insecticides** are, for example, **imidacloprid**, **cypermethrin** and **permethrin**.

L13 ANSWER 17 OF 37 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2000:74781 HCAPLUS
DOCUMENT NUMBER: 132:74885
TITLE: **Insecticide**
INVENTOR(S): Zhang, Tianliang; Zhang, Yi
PATENT ASSIGNEE(S): Peop. Rep. China
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 3 pp.

CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1176052	A	19980318	CN 1997-105995	19970723

AB The **insecticide** is composed of white black 20-40, Ca carbonate 30-50, and the mixt. of synergist and **imidacloprid** 5-30%. The **insecticide** may contain **cypermethrin**, the ratio of **imidacloprid** to **cypermethrin** is 1.5:1.

L13 ANSWER 18 OF 37 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2000:53333 HCAPLUS
DOCUMENT NUMBER: 132:104089
TITLE: Synergistic **insecticidal** and acaricidal compositions comprising emamectin
INVENTOR(S): Arslan-Bir, Martine
PATENT ASSIGNEE(S): Novartis A.-G., Switz.; Novartis-Erfindungen Verwaltungsgesellschaft m.b.H.
SOURCE: PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000002453	A1	20000120	WO 1999-EP4656	19990705
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
FR 2780857	A1	20000114	FR 1999-7876	19990617
AU 9949070	A1	20000201	AU 1999-49070	19990705
NL 1012526	A1	20000110	NL 1999-1012526	19990706
NL 1012526	C2	20000516		
PRIORITY APPLN. INFO.:			CH 1998-1442	19980707
			WO 1999-EP4656	19990705

AB The title compns. comprise emamectin and aldicarb, azinphos-Me, benfuracarb, bifenthrin, buprofezin, carbofuran, carbosulfan, cartap, chlorfluazuron, chlorpyrifos, cyfluthrin, lambda-cyhalothrin, alpha-**cypermethrin**, zeta-**cypermethrin**, deltamethrin, diflubenzuron; endosulfan, ethiofencarb, fenitrothion, fenobucarb, fenvalerate, formothion, methiocarb, heptenophos, **imidacloprid**, isoprocarb, methamidophos, methomyl, mevinphos, parathion, parathion-Me, phosalone, pirimicarb, propoxur, teflubenzuron, terbufos, triazamate, fenobucarb, tebufenozide, fipronil, beta-cyfluthrin, silafluofen, fenpyroximate, pyridaben, fenazaquin, pyriproxyfen, pyrimidifen, nitenpyram, NI-25, acetamiprid, avermectin, an **insect**-active ext. from a plant, a prepn. contg. **insect**-active nematodes, a prepn. obtainable from Bacillus subtilis, azinphos A, azinphos M, azocyclotin, bendiocarb, bensultap; beta-cyfluthrin, BPMC, tebufenpyrad, tebupirimphos, tefluthrin, temephos, terbam, tetrachlorvinphos, thiafenox, thiodicarb or spinosad.
REFERENCE COUNT: 10
REFERENCE(S): (1) Bayer AG; WO 9827817 A 1998 HCAPLUS
(2) Hoechst AG; EP 0242502 A 1987 HCAPLUS

(3) Leibee, G; Fla Entomol 1995, V78(1), P82 HCAPLUS
(4) Merck & Co Inc; GB 2220856 A 1990 HCAPLUS
(6) Novartis AG; WO 9925187 A 1999 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 19 OF 37 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1999:727441 HCAPLUS
DOCUMENT NUMBER: 131:307904
TITLE: Imidacloprid compound preparation
INVENTOR(S): Guo, Wudi; Zhou, Huizhong
PATENT ASSIGNEE(S): Shenyang Chemical Industry Institute, Ministry of Chemical Industry, Peop. Rep. China
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 4 pp.
CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1147335	A	19970416	CN 1995-116465	19951006

AB The prepn. is composed of **imidacloprid**, nereid toxin, pyrethrins, org. phosphorus, carbamate, and heterocyclic **pesticide**, and also contains stabilizer, assistant, and filler. The nereid toxin **pesticide** is ethiofencarb, dimehypo, thiocyclam and thiocyanate; the pyrethrins is cyhalothrin, fenvalerate, **cypermethrin**, deltamethrin; the organophosphorus **pesticide** is phoxim, chlorpyrifos, triazophos, methamidophos, dimethoate, folimat; the carbamate **pesticide** is Metacrate, pirimicarb; the heterocyclic **pesticide** is buprofezin. It can be wettable powder, water disperser, suspending agent, and emulsion. The stabilizer is selected from citric acid, boric acid, HOAc, H3PO4, NH4Cl, (NH4)2SO4; the assistant is sodium lignosulfonate, lauryl sodium sulfate, disperser NNO, penetrant T, agricultural emulsifier No. 500, No. 600, No. 100, CMC, 1656H, 1656L9; the filler is kaolin, bentonite, diatomaceous earth, tuaobangtu, CaCO3, NaHCO3. It is low in toxicity, highly effective, and can prevent and cure sucking **pest** such as leafhopper, plant hopper and so on.
IT **52315-07-8, Cypermethrin**
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(**pesticidal imidacloprid** compd. prepn.)

L13 ANSWER 20 OF 37 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1999:570686 HCAPLUS
DOCUMENT NUMBER: 131:224852
TITLE: Relative toxicity of **pesticides** to **pest** and beneficial **insects** in potato crops in Victoria, Australia
AUTHOR(S): Symington, Catherine A.; Horne, Paul A.
CORPORATE SOURCE: Department of Zoology School of Biological Sciences, La Trobe University, Bundoora, 3083, Australia
SOURCE: Ecotoxicol., [Int. Conf.] (1998), Meeting Date 1996, 279-286. Editor(s): Haskell, Peter T.; McEwen, Peter. Kluwer: Dordrecht, Neth.
CODEN: 68BTAO
DOCUMENT TYPE: Conference
LANGUAGE: English
AB The toxicity of endosulfan, methamidophos, thiodicarb, pirimicarb, **permethrin, imidacloprid**, mancozeb and difenoconazole was tested in the lab against the potato tuber moth (Phthorimaea operculella) and the **parasitoids** Orgilus lepidus, Copidosoma koehleri and Apanteles subandinus. Thiodicarb was the only **insecticide** that was less toxic to Orgilus lepidus than to P. operculella,.
REFERENCE COUNT: 14
REFERENCE(S): (1) Dillard, H; Australian Journal of Experimental

Agriculture 1993, V33(5), P653 HCAPLUS
(8) Keeratikasikorn, M; Journal of the Australian Entomological Society 1981, V20, P309 HCAPLUS
(9) Lingren, P; Journal of Economic Entomology 1972, V65, P1295 HCAPLUS
(10) Plapp, F; Environmental Entomology 1977, V6, P381 HCAPLUS
(12) Powell, J; Florida Entomologist 1985, V68, P692 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 21 OF 37 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1999:480946 HCAPLUS
DOCUMENT NUMBER: 131:140842
TITLE: **Insecticides** and preservatives for lumber
INVENTOR(S): Ueno, Takahide; Yonetani, Koreyasu
PATENT ASSIGNEE(S): Yuko Chemical Industries Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11207706	A2	19990803	JP 1998-16808	19980129

AB A preservative, propiconazole, in combination with .gtoreq. 1 **insecticide** selected from the group consisting of tralomethrin, bifenthrin, **permethrin**, **imidacloprid**, fenobucarb, fipronil, and pyriproxyfen with the ratio of **insecticide** /preservative being 1.0-15.0, is used for preserving lumber. The conc. of the mixt. in water contains .gtoreq. 40 fold effective concn. of the mixt., and the prepn. is dild. with water prior to application to lumber. The mixt. is stable for a long period.

L13 ANSWER 22 OF 37 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1999:424809 HCAPLUS
DOCUMENT NUMBER: 131:69666
TITLE: Evaluation of eleven **insecticides** for controlling aphis in wheat field
AUTHOR(S): Wang, Jinxin; Liu, Feng; Mu, Wei; Zhang, Zheng Shen
CORPORATE SOURCE: Shandong Key Laboratory of Pesticide Toxicology and Applicational Technique, Shandong Agricultural University, Tai'an, 271018, Peop. Rep. China
SOURCE: Nongyao (1999), 38(6), 21,29
CODEN: NONGFP; ISSN: 1006-0413
PUBLISHER: Nongyao Bianjibu
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
AB The efficacy of eleven **insecticides** was evaluated against aphis in wheat field. The results showed that carbosulfan, **imidacloprid**, endosulfan, acetaniprid and beta-cyfluthrin were the best of 11 **insecticides**. The efficiency of each was over 95% after 1.apprx.7 days of treatment with 2000 times diluent. These **insecticides** showed good performance to control wheat aphis. RH-7988 and deltamethrin were the second best. The efficiency of each was 90%. **Cypermethrin**, malathion, omethoate and dimethoate showed lower efficacy.

L13 ANSWER 23 OF 37 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1998:311029 HCAPLUS
DOCUMENT NUMBER: 129:77892
TITLE: Susceptibility of predaceous hemipteran species to selected **insecticides** on soybean in Louisiana

AUTHOR(S): Boyd, Michael L.; Boethel, David J.
CORPORATE SOURCE: Department of Entomology, Louisiana Agricultural Experiment Station, Louisiana State University Agricultural Center, Baton Rouge, LA, 70803, USA
SOURCE: J. Econ. Entomol. (1998), 91(2), 401-409
CODEN: JEENAI; ISSN: 0022-0493
PUBLISHER: Entomological Society of America
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Toxicity of selected **insecticides** to hemipteran predators [i.e., Geocoris punctipes (Say), Nabis capsiformis Germar, Nabis roseipennis Reuter, and Podisus maculiventris (Say)] was evaluated by contact with foliar residues and indirectly through the consumption of prey [i.e. soybean looper, Pseudoplusia includens (Walker)] previously exposed to **insecticides**. Methyl parathion and **permethrin** generally were more toxic than newer **insecticides** after predators were exposed to treated foliage. Chlorfenapyr caused contact toxicity equal to **permethrin** and methyl parathion. Exposure to foliage treated with emamectin benzoate resulted in lower mortality as compared with chlorfenapyr. Foliage treated with Bacillus thuringiensis Berliner subsp. kurstaki had the lowest contact toxicity to hemipteran predators of all **insecticides** tested. Std. **insecticides** (i.e., methyl parathion and thiodicarb) caused low indirect toxicity to hemipteran predators after consumption of treated prey. Chlorfenapyr caused significantly greater indirect toxicity than emamectin benzoate, **permethrin**, and thiodicarb to adult N. roseipennis. Consumption of chlorfenapyr-treated prey also caused significantly greater mortality than **imidacloprid**, **permethrin**, spinosad, and thiodicarb to G. punctipes adults. These results demonstrate that most of the newer compds. were more selective than older **insecticides**. This greater selectivity will enable soybean producers to combat **pests** but conserve resident beneficial arthropod populations that help restrain **pest** resurgence and prevent secondary **pest** outbreaks.

L13 ANSWER 24 OF 37 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1998:146652 HCAPLUS
DOCUMENT NUMBER: 128:189505
TITLE: **Insecticidal** device
INVENTOR(S): Shasha, Baruch S.; McGuire, Michael R.; Hu, Xing Ping; Prokopy, Ronald J.
PATENT ASSIGNEE(S): United States Dept. of Agriculture, USA
SOURCE: U.S., 7 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5720968	A	19980224	US 1996-701088	19960821
WO 9807315	A1	19980226	WO 1997-US14493	19970818
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9740720	A1	19980306	AU 1997-40720	19970818
EP 921724	A1	19990616	EP 1997-938380	19970818
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

PRIORITY APPLN. INFO.: US 1996-701088 19960821

WO 1997-US14493 19970818

AB The invention is a device for delivering an **insecticide**, made of (a) an outer layer comprising a porous water-insol. polymer; (b) an inner layer in contact with the outer layer, the inner layer comprising a water-sol. feeding stimulant and a carbohydrate which is at least partially gelatinized; and (c) a toxicant which is present on or in the outer layer, the inner layer, or both. The **pests** for which the device may be used are those that can be attracted to an object to feed and/or lay eggs, such as the apple maggot fly, the Mediterranean fruit fly, the house fly, the oriental fruit fly, the blueberry fruit fly, the olive fruit fly, the melon fruit fly, and the Mexican fruit fly as well as other flies, beetles, wasps, moths, cockroaches, and any other **insect** that can be lured to a device for feeding or egg laying. The porous water-insol. polymeric materials are pits, shellacs, linseed oil and other water-sol. or water-suspendible material that becomes insol. upon drying. Examples of water-sol. feeding stimulants are sucrose, glucose, fructose, molasses, maltodextrin, and corn syrup as well as corn flour, gluten or other sugary or proteinaceous and lipid materials. Examples of carbohydrates are corn flour, corn starch, wheat starch, and potato starch. Toxicants which may be used are dimethoate, phloxine B, avermectin, azinphosmethyl, diazinon, **permethrin**, **imidacloprid**, malathion, methomyl, etc. A high boiling liq. such as glycerin may optionally be added to the carbohydrate first layer to prevent cracking.

L13 ANSWER 25 OF 37 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1998:93168 HCAPLUS
DOCUMENT NUMBER: 128:137536
TITLE: Behavioral response and virus vector ability of Myzus persicae (Homoptera: Aphididae) probing on pepper plants treated with aphicides
AUTHOR(S): Collar, J. L.; Avilla, C.; Duque, M.; Fereres, A.
CORPORATE SOURCE: Departamento de Proteccion Vegetal, Centro de Ciencias Medioambientales, Consejo Superior de Investigaciones Cientificas, Madrid, 28006, Spain
SOURCE: J. Econ. Entomol. (1997), 90(6), 1628-1634
CODEN: JEENAI; ISSN: 0022-0493
PUBLISHER: Entomological Society of America
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Behavioral response of the green peach aphid, Myzus persicae (Sulzer), to 3 different **insecticides** (**cypermethrin**, pirimicarb, and **imidacloprid**) was assessed on pepper, Capsicum annuum L., using elec. monitoring of aphid probing behavior. This technique enabled us to assess stylet penetration pathways as well as cell membrane punctures (potential drops). The effect of these **insecticide** treatments on potato virus Y (PVY) transmission by M. persicae also was tested. Pirimicarb and **imidacloprid** did not significantly affect probing behavior or PVY transmission efficiency when aphids were allowed a 10-min acquisition access period on infected **insecticide** -treated plants. Conversely, **cypermethrin** affected aphid behavior as well as PVY transmission efficiency. Aphids probing on **cypermethrin**-treated plants produced fewer (1.7 vs. 3.3) and shorter (41 vs. 152 s) penetrations than those probing on untreated plants. They also produced a lower no. of potential drops (1.3 vs. 4.2). Moreover, **cypermethrin** caused a paralysis of aphids within 2.5 min of exposure to the treated plants. Aphids were not able to subsequently inoculate healthy plants. However, when the acquisition access period was shorter than 2.5 min, aphids were able to transmit PVY despite the **cypermethrin** treatment of the virus source plant. The possible existence of an addnl. deterrent effect caused by **cypermethrin** on M. persicae and its implications in PVY epidemiol. is discussed.

L13 ANSWER 26 OF 37 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1997:785198 HCAPLUS

DOCUMENT NUMBER: 128:58562
TITLE: Toxic effect of **pesticides** on the larvae of Chrysoperla carnea
AUTHOR(S): Toda, Seishi; Kashio, Tomotoshi
CORPORATE SOURCE: Kumamoto Prefectural Plant Protection Office, Koushimachi, Japan
SOURCE: Kyushu Byogaichu Kenkyukaiho (1997), 43, 101-105
CODEN: KBKKDW; ISSN: 0385-6410
PUBLISHER: Kyushu Byogaichu Kenkyukai
DOCUMENT TYPE: Journal
LANGUAGE: Japanese

AB The toxic effect of 34 **insecticides**, 6 acaricides and 9 fungicides on the 1st instar larvae of Chrysoperla carnea were tested by 2 methods, a direct dipping test and a residual contact test at 25.+-.1.degree. in the lab. In the former method, larvae were dipped in aq. dilns. of the **pesticide**. In the latter method, larvae were reared on cucumber leaves with **insects** treated with the aq. dilns. Among pyrethroid-group **insecticides**, ethofenprox, **permethrin** and **cypermethrin** showed high toxicity, but 5 other **insecticides** showed low toxicity. Although three carbamate-group **insecticides** showed high toxicity to the **insect** larvae, pirimicarb showed no toxicity. All organophosphate-group **insecticides** except DEP showed high toxicity. **Insect** growth regulator-group **insecticides**, flufenoxuron, teflubenzuron and chlorfluazuron, showed no toxicity within 48 h of treatment, but showed high mortality after 96 h. Tebufenozide, buprofezin and pyriproxyfen were not toxic. Chloronicotinyl-group **insecticides**, nitenpyram, **imidacloprid** and acetamiprid showed low toxicity by a dipping test, but showed high toxicity by a residual contact test. Acaricides and fungicides shows no toxicity.

L13 ANSWER 27 OF 37 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1997:295727 HCAPLUS
DOCUMENT NUMBER: 126:289399
TITLE: Changes in resistance to **insecticides** in tobacco budworm populations in Mississippi, 1993-1995
AUTHOR(S): Elzen, G. W.
CORPORATE SOURCE: Biological Control of Pests Research Unit, USDA, ARS, Weslaco, TX, 78596, USA
SOURCE: Southwest. Entomol. (1997), 22(1), 61-72
CODEN: SENTDD; ISSN: 0147-1724
PUBLISHER: Southwestern Entomological Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Strains of the tobacco budworm, Heliothis virescens (F.), collected in Mississippi in 1993 through 1995 were evaluated in bioassays to four classes of **insecticides** and Bacillus thuringiensis Berliner. High frequencies of resistance were found to **cypermethrin**, methomyl, and thiodicarb. Resistance to the organophosphorus **insecticide** profenofos was found in several strains. Significant resistance to B. thuringiensis Berliner was obsd. in one strain. Possible synergism of a pyrethroid in combination with the synergist piperonyl butoxide was obsd. **Imidacloprid**, representing a new class of **insecticide**, was found to have ovicidal and larvicidal activity on H. virescens. Tolerance to **imidacloprid** was present in a field population resistant to carbamates, but not to organophosphorus **insecticides**, suggesting the possibility of cross-resistance between carbamates and **imidacloprid**. Resistance to carbamates was present in some populations susceptible to profenofos, indicating the presence of different mechanisms of resistance for the two classes of **insecticides**. Resistance to pyrethroids appear to be stabilized at a high level.

L13 ANSWER 28 OF 37 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1997:216269 HCAPLUS
DOCUMENT NUMBER: 126:208509

TITLE: **Insecticide** susceptibility and detoxication enzyme activities in permethrin-selected diamondback moths
AUTHOR(S): Yu, S. J.; Nguyen, S. N.
CORPORATE SOURCE: Dep. Entomology and Nematology, Univ. Florida, Gainesville, FL, 32611, USA
SOURCE: Pestic. Biochem. Physiol. (1996), 56(1), 69-77
CODEN: PCBPBS; ISSN: 0048-3575
PUBLISHER: Academic
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Selection of larvae of the diamondback moth, Plutella xylostella (L.), with permethrin increased resistance. After 21 generations of continuous selection pressure, resistance ot permethrin was over 600-fold in this strain compared with the unselected parental strain. The permethrin-selected strain was also cross-resistant to all pyrethroids tested, but remained susceptible to organophosphorus, carbamate, cyclodiene, chloronicotinyl, avermectin, and microbial **insecticides** tested. Detoxication enzyme assays revealed that activities of microsomal oxidases (epoxidases, hydroxylases, sulfoxidase, N-demethylase, and O-dealkylases), glutathione S-transferases (DCNB, CDNB, and PNPA conjugation), hydrolases, (general esterase, carboxylesterases, .beta.-glucosidase, acetylcholinesterase, and carboxylamidase), and reductases (juglone reductase and cytochrome c reductase) and levels of cytochrome P 450 ad cytochrome b5 were similar in the permethrin-selected and parental strains. There was no difference in the rate of cuticular penetration of permethrin between the two strains. Synergist studies showed that neither piperonylbutoxide (microsomal oxidase inhibitor) nor S,S,S-tri-Bu phosphorotrithioate (DEF, esterase inhibitor) reduced the level of resistance to permethrin. Pyrethroid resistance obsd. in this strain was most likely attributed to decreased target site sensitivity.

IT **138261-41-3, Imidacloprid**
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(**insecticide** susceptibility of **permethrin**-selected diamondback moths)

L13 ANSWER 29 OF 37 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1997:60235 HCAPLUS
DOCUMENT NUMBER: 126:86068
TITLE: MB-599, a new synergist in **pest** control
AUTHOR(S): Szekely, I.; Pap, L.; Bertok, B.
CORPORATE SOURCE: CHINNOIN AgChem Business Unit, Budapest, H-1780, Hung.
SOURCE: Brighton Crop Prot. Conf.--Pests Dis. (1996), (Vol. 2), 473-480
CODEN: BCPDED; ISSN: 0955-1506
PUBLISHER: British Crop Protection Council
DOCUMENT TYPE: Journal
LANGUAGE: English

AB MB-599 [Verbutin; 1-(3,4-dimethoxyphenyl)ethyl but-2-ynyl ether], is a novel synergist which increases the activity of **insecticides** against a broad range of **insect pests** important in plant protection, public health and veterinary fields of use. It was selected from hundreds of newly synthesized compds. by the level and selectivity of synergistic action. Efficacy studies carried out on Leptinotarsa decemlineata, Heliothis armigera, Aphis gossypii, Rhopalosiphum padi, Acyrthosiphon pisum, Tetranychus urticae, Musca domestica and Blattella germanica have demonstrated the excellent synergistic activity of MB-599 on the potency of different **insecticides** (carbofuran, carbaryl, **permethrin**, tetramethrin, beta-**cypermethrin**, fipronil), aphicides (pirimicarb, triazamate, **imidacloprid**) and miticides (fenazaquin, tebufenpyrad). MB-599 used as foliar spray additive in field conditions multiplied the efficacy of active ingredients 2-4-fold even at the 1:1 **insecticide**:synergist ratio. This high synergist potency allows a decrease in the dose of treatments. MB-599 is classified as slightly toxic and has proved to be non-mutagenic by Ames and SCE

tests.

L13 ANSWER 30 OF 37 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1996:566214 HCAPLUS
DOCUMENT NUMBER: 125:214769
TITLE: Topical toxicity of imidacloprid, fipronil, and seven conventional **insecticides** to the adult convergent lady beetle (Coleoptera: Coccinellidae)
AUTHOR(S): Kaakeh, Nawal; Kaakeh, Walid; Bennett, Gary W.
CORPORATE SOURCE: Center Urban and Industrial Pest Management, Purdue University, West Lafayette, 47907-1158, USA
SOURCE: J. Entomol. Sci. (1996), 31(3), 315-322
CODEN: JESCEP; ISSN: 0749-8004
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The relative toxicities (comparing LD50 and LT50s) of two synthetic pyrethroids (**cypermethrin** and fenvalerate), two organophosphorus **insecticides** (chlorpyrifos, diazinon), three carbamates (propoxur, carbaryl, bendiocarb), a phenylpyrazole representative (fipronil), and a heterocyclic nitromethylene representative (**imidacloprid** or **NTN 33893**) were assessed with topical bioassays in the lab. against the convergent lady beetle, Hippodamia convergens Guerin Meneville. LD50 values decreased (i.e., toxicity increased) with an increased time after application of a specific **insecticide**. The differences between the LD50 values caused by various **insecticides** were significant. Among tested **insecticides**, **cypermethrin** and bendiocarb were the most toxic; fipronil was the least toxic. H. convergens responded differently to different **insecticides** within the same class. Beetles exhibited similar responses to both organophosphorothionates chlorpyrifos and diazinon 24 to 72 h after application. Of the carbamates, propoxur was 2.4 and 3.5 times less toxic than carbaryl and bendiocarb, resp. Of the pyrethroids tested, **cypermethrin** was significantly more toxic than fenvalerate. At 800 ppm, **cypermethrin** and bendiocarb were the fastest in killing H. convergens among the tested **insecticides**. The ranking of **insecticides** in decreasing order of LT50 values was as follows: fipronil > diazinon > chlorpyrifos > propoxur > carbaryl > fenvalerate and **imidacloprid**.
IT **52315-07-8**, (**Cypermethrin**
RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)
(topical toxicity of **imidacloprid**, fipronil, and conventional **insecticides** to the adult convergent lady beetle)

L13 ANSWER 31 OF 37 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1996:511131 HCAPLUS
DOCUMENT NUMBER: 125:161084
TITLE: Use of imidacloprid and newer generation synthetic pyrethroids to control the spread of barley yellow dwarf luteovirus in cereals
AUTHOR(S): McKirdy, S. J.; Jones, R. A. C.
CORPORATE SOURCE: Plant Pathology Group, Agriculture Western Australia, Perth, 6151, Australia
SOURCE: Plant Dis. (1996), 80(8), 895-901
CODEN: PLDIDE; ISSN: 0191-2917
DOCUMENT TYPE: Journal
LANGUAGE: English
AB In seven field expts. with wheat and oats sown in autumn, **insecticides** were applied to control aphids and thereby diminish the spread of aphid-transmitted barley yellow dwarf luteovirus (BYDV). Disease progress was followed over time by ELISA (ELISA) on leaf samples using antiserum specific to BYDV serotype PAV. Two foliar applications of either of two newer generation synthetic pyrethroid **insecticides**, alpha-**cypermethrin** or beta-cyfluthrin, sprayed before flag leaf emergence and at rates as low as 12.5 g a.i./ha, decreased spread of BYDV by up to 75% and increased grain yields by up to 41%. These

pyrethroids were more effective in decreasing BYDV spread than foliar applications of pirimicarb (150 g a.i./ha) or dimethoate (320 g a.i./ha), two applications of which decreased BYDV spread by up to 45% and increased grain yield by up to 14%. Seed treatment with **imidacloprid** (70 g a.i./ha) delayed BYDV spread in wheat and oats for up to 6 wk after plant emergence. When **imidacloprid** seed dressing was followed by two foliar sprays of alpha-**cypermethrin**, BYDV incidence was decreased by up to 88%, and grain yield was increased by up to 76%. The predominant colonizing aphid species was Rhopalosiphum padi. Dressing seed with **imidacloprid** and/or foliar applications of the synthetic pyrethroids markedly decreased the nos. of aphids. Nos. colonizing plants were mostly lower than 10 per tiller on nontreated plots, suggesting the grain yield increases resulting from **insecticide** application were due to control of BYDV rather than to decreased aphid feeding damage. To minimize BYDV-induced grain yield losses in autumn-sown cereals, protection by **insecticides** should be provided from soon after plant emergence until the twelfth week of plant growth.

L13 ANSWER 32 OF 37 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1995:890997 HCAPLUS
DOCUMENT NUMBER: 123:308630
TITLE: **Insecticide** resistance in field and laboratory strains of western flower thrips (Thysanoptera: Thripidae)
AUTHOR(S): Zhao, Guangyu; Brown, John M.; Knowles, Charles O.
CORPORATE SOURCE: Dep. of Entomology, Univ. of Missouri, Columbia, MO, 65211, USA
SOURCE: J. Econ. Entomol. (1995), 88(5), 1164-70
CODEN: JEENAI; ISSN: 0022-0493
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Western flower thrips, Frankliniella occidentalis (Pergande), from 5 com. greenhouses were resistant to diazinon, methomyl, bendiocarb, and **cypermethrin**, except in 2 tests with bendiocarb. When compared with the UMC-A ref. strain, resistance ratios from LC90s (RR90) at 24 h ranged from 1.04 to 98 for diazinon, 3.4 to 26 for methomyl, 0.9 to 11 for bendiocarb, and 18.3 to 273 for **cypermethrin**. The authors also did toxicity studies on 2 lab. strains (UMC, KCM). Compared with the UMC-A strain, RR90s indicated that UMC thrips were resistant to diazinon (14-fold), methomyl (3.6-fold), and **cypermethrin** (232-fold), but not to bendiocarb. The RR90 of KCM thrips reared under diazinon selection increased from 4.0 to 270 when compared with UMC-A thrips. During diazinon selection, cross-resistance to bendiocarb was evident, with the RR90 increasing from 0.4 to 14. Cross-resistance to **cypermethrin** also was present to the LC50 (3.9-fold), but not at the LC90. When compared with UMC thrips, KCM thrips was also resistant to **permethrin** (RR90=2.5), fenvalerate (RR90=3.6), DDT (RR90=6.0), and **imidacloprid** (RR90=14), but not to amitraz. Piperonyl butoxide, but not S,S,S-tri-Bu phosphorotrithioate, synergized the toxicity of diazinon, bendiocarb, and fenvalerate to KCM thrips.

L13 ANSWER 33 OF 37 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1995:544717 HCAPLUS
DOCUMENT NUMBER: 123:3327
TITLE: **Pest** management systems for eggplant arthropods: a plan to control **pest** resurgence resulting from the destruction of natural enemies
AUTHOR(S): Nemoto, Hisashi
CORPORATE SOURCE: Section of Plant Protection and Fertilization, Saitama Horticultural Experiment Station, Kuki, 346, Japan
SOURCE: JARQ (1995), 29(1), 25-9
CODEN: JARJA9; ISSN: 0021-3551
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Eggplants in an exptl. plot were continuously sprayed with the **insecticides permethrin**, milbemectin, phenthoate and **imidacloprid** to evaluate their resp. side-effects. Effects on populations of **pests** and of their natural enemies were assessed. The results revealed the importance of natural enemies such as anthocorid bugs, Orius spp. Application of a **pesticide** may cause a resurgence of a **pest** population because of the development of resistance by the **pest** and nonselective killing of predators. Methods of control of **pests** that would not affect substantially natural enemies were then developed. **Imidacloprid** which is highly effective against the **pests** Hemiptera and Thrips palmi caused a resurgence of the spider mite. Milbemectin which exerts a minimal adverse effect on Orius spp. when used in combination with **imidacloprid**, maximized the latter's advantages while minimizing its disadvantages.

L13 ANSWER 34 OF 37 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1995:291117 HCAPLUS
DOCUMENT NUMBER: 122:48753
TITLE: Effects of **insecticides** on the entomopathogenic nematode Steinernema carpocapsae Weiser
AUTHOR(S): Zhang, Li; Shono, Toshio; Yamanaka, Satoshi; Tanabe, Hiroshi
CORPORATE SOURCE: Institute Agriculture and Forestry, University Tsukuba, Ibaraki, 305, Japan
SOURCE: Appl. Entomol. Zool. (1994), 29(4), 539-47
CODEN: APEZAW; ISSN: 0003-6862
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The toxic effects of 14 organophosphates (OP's), 7 carbamates, 4 synthetic pyrethroids, cartap and **imidacloprid** on the entomopathogenic nematode Steinernema carpocapsae WEISER were tested by checking the mortality of infective juveniles (IJs) in **insecticide** solns. Cartap and two OP's (profenofos and pyraclofos) were the most toxic to the IJs: 83.4% mortality for cartap and 57.1 and 47.8% for profenofos and pyraclofos, resp., in solns. of 100 .mu.g/mL after 48 h exposure. Seven OP's (diazinon, dichlorvos, fenthion, malathion, trichlorfon, propetamphos and prothiofos) showed weak toxicity at 100 .mu.g/mL. Other chems. tested showed no toxicity to the IJs at 100 .mu.g/mL. The IJs were incubated in **insecticide** solns. (100 .mu.g/mL) for 24 h and then used to treat newly-molted last instar Spodoptera litura larvae. OP's (except acephate, malathion and temephos), 1 carbamate (methomyl), 2 pyrethroids (**permethrin** and ethofenprox) and cartap apparently inhibited infectivities of IJs to these larvae. However, when **insecticides** were washed off the body surface of IJs, only cartap (.gtoreq.10 .mu.g/mL) and profenofos (100 .mu.g/mL) left a detrimental effect on the IJ infectivity.

L13 ANSWER 35 OF 37 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1992:123242 HCAPLUS
DOCUMENT NUMBER: 116:123242
TITLE: Multinomial logit analysis of the effects of chemical mixtures
AUTHOR(S): Hughes, Gordon A.; Robertson, Jacqueline L.; Savin, N. E.
CORPORATE SOURCE: Pac. Southwest for. Range Exp. Stn., For. Serv., Berkeley, CA, 94704, USA
SOURCE: J. Econ. Entomol. (1991), 84(6), 1957-68
CODEN: JEENAI; ISSN: 0022-0493
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Uses of a multinomial logit model for investigations of chem. interactions were investigated. The probabilities of four types of effects when mixts. of benzoylphenylureas (BPUs; diflubenzuron or triflumuron) or a juvenile hormone analog (JHA; methoprene) with selected pyrethroids (fenvalerate or

permethrin) were compared. Bioassays were done on fourth- or sixth-instar western spruce budworm, Choristoneura occidentalis. When sprayed on fourth instars, mixts. of methoprene + fenvalerate, triflumuron + fenvalerate, and diflubenzuron + **permethrin** produced effects significantly different from those predicted by the hypothesis of additive effectiveness. When sprayed on sixth instars, only mixts. of the BPUs with fenvalerate produced effects significantly different from this hypothesis. Thus, the multinominal logit model may be useful to identify interactions between chems. that **merit** biochem. investigation.

L13 ANSWER 36 OF 37 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1988:624677 HCAPLUS
DOCUMENT NUMBER: 109:224677
TITLE: Mortality of range caterpillar (Lepidoptera: Saturniidae) exposed to various combinations of **insecticides** and piperonyl butoxide
AUTHOR(S): Hagler, James R.; Owens, John C.; Smith, David W.; Lewis, Brad E.
CORPORATE SOURCE: Dep. Entomol., Plant Pathol. Weed Sci., New Mexico State Univ., Las Cruces, NM, 88003, USA
SOURCE: J. Econ. Entomol. (1988), 81(5), 1304-6
CODEN: JEENAI; ISSN: 0022-0493
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A lab. study tested 3 pyrethroid **insecticides** sep. and in combination with piperonyl butoxide (PB) at ratios of 1 part **insecticide** to 4 and 8 parts PB. Third-instar range caterpillar (Hemileuca oliviae) were exposed to treated filter paper to det. toxicity and synergistic effects between the binary mixts. Mortality was recorded at 48 h after treatment. All 3 **insecticides** were highly toxic when used alone. PB synergized **cypermethrin** at both ratios; however, PB had little or no synergistic effect on **permethrin** or fenvalerate. Combinations of **cypermethrin** and PB may **merit** testing in field situations.

L13 ANSWER 37 OF 37 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1984:402275 HCAPLUS
DOCUMENT NUMBER: 101:2275
TITLE: Joint action of pyrethroids with organophosphorus and carbamate **insecticides** applied to western spruce budworm (Lepidoptera:Tortricidae)
AUTHOR(S): Robertson, Jacqueline L.; Smith, Kimberly C.
CORPORATE SOURCE: For. Serv., U.S. Dep. Agric., Berkeley, CA, 94701, USA
SOURCE: J. Econ. Entomol. (1984), 77(1), 16-22
CODEN: JEENAI; ISSN: 0022-0493
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A statistical method for testing mixts. of chem. based on a model for independent joint action with no correlation in susceptibility is described. Antagonism, synergism, and independence may be identified at one response level or over a range of levels by this method. Each of 3 pyrethroids studied were tested in a 1:10 mixt. with each of 4 carbamates and 5 organophosphorous **insecticides** by topical application to 6th-instar Chloristoneura occidentalis. Co-toxicity ratios (LC50 predicted .div. LC50 obsd.; LC50 = median lethal concn.) ranged from 0.5 to 7.3 but were not reliable indicators of the type of joint action occurring because response lines of mixt. components were not generally parallel. By the criterion of synergism in the upper (>50% mortality) concn. range, mixts. of fenvalerate with aminocarb [2032-59-9], carbaryl [63-25-2], methomyl [16752-77-5], thiodicarb [59669-26-0], acephate [30560-19-1], fenitrothion [122-14-5], or phosmet [732-11-6]; decamethrin [52918-63-5] with acephate, carbaryl, chlorpyrifos [2921-88-2], or fenitrothion; and **permethrin** [**52645-53-1**] with carbaryl, methomyl, or thiodicarb appear to **merit** testing in more intensive bioassays involving spray applications to **insects** on foliage.

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               (52315-07-8/RN)
             1 138261-41-3/BI
               (138261-41-3/RN)
             1 287480-87-9/BI
               (287480-87-9/RN)
L14          3 (52315-07-8/BI OR 138261-41-3/BI OR 287480-87-9/BI)

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=> d ide can l14 1-3


L14  ANSWER 1 OF 3  REGISTRY  COPYRIGHT 2001 ACS
RN   287480-87-9  REGISTRY
CN   Cyclopropanecarboxylic acid, 3-(2,2-dichloroethenyl)-2,2-dimethyl-,
     cyano(3-phenoxyphenyl)methyl ester, mixt. with 1-[(6-chloro-3-
     pyridinyl)methyl]-N-nitro-2-imidazolidinimine (9CI)  (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN   2-Imidazolidinimine, 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-, mixt.
     contg. (9CI)
OTHER NAMES:
CN   Cypermethrin-imidacloprid mixt.
CN   Imidacloprid-cypermethrin mixt.
MF   C22 H19 Cl2 N O3 . C9 H10 Cl N5 O2
CI   MXS
SR   CA
LC   STN Files:   CA, CAPLUS, TOXLIT

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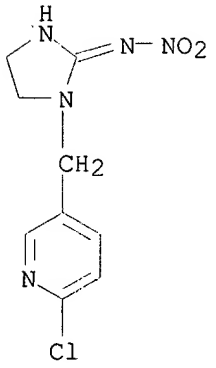
CRN 138261-41-3
CMF C9 H10 Cl N5 O2



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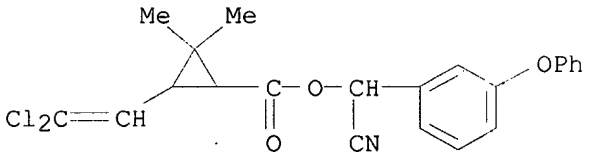
CMF C22 H19 Cl2 N O3



2 REFERENCES IN FILE CA (1967 TO DATE)
2 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 133:160871

REFERENCE 2: 133:146298

L14 ANSWER 2 OF 3 REGISTRY COPYRIGHT 2001 ACS
RN **138261-41-3** REGISTRY
CN 2-Imidazolidinimine, 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1-[(6-Chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine
CN Admire
CN BAY-NTN 33893
CN Confidor
CN Confidor 200SL
CN Confidor SL
CN CP 1
CN Gaucho
CN Imidacloprid
CN Merit
CN Merit (insecticide)
CN NTN 33893
CN Provado
AR 105827-78-9
MF C9 H10 Cl N5 O2
CI COM
SR CAS Registry Services
LC STN Files: AGRICOLA, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMLIST, CIN, EMBASE, NIOSHTIC, PROMT, RTECS*,

TOXLINE, TOXLIT, USPATFULL, VETU
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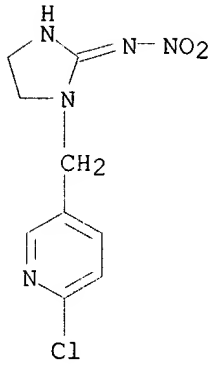

775 REFERENCES IN FILE CA (1967 TO DATE)
41 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
776 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 134:158841

REFERENCE 2: 134:158813

REFERENCE 3: 134:152232

REFERENCE 4: 134:146566

REFERENCE 5: 134:143262

REFERENCE 6: 134:143258

REFERENCE 7: 134:143255

REFERENCE 8: 134:143252

REFERENCE 9: 134:143242

REFERENCE 10: 134:143240

L14 ANSWER 3 OF 3 REGISTRY COPYRIGHT 2001 ACS
RN **52315-07-8** REGISTRY
CN Cyclopropanecarboxylic acid, 3-(2,2-dichloroethenyl)-2,2-dimethyl-, cyano(3-phenoxyphenyl)methyl ester (9CI) (CA INDEX NAME)
OTHER NAMES:
CN .alpha.-Cyano-m-phenoxybenzyl 3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate
CN Agrothrin
CN Ambush C
CN Ambush CY
CN Ammo
CN Ammo (pesticide)
CN Antiborer 3767
CN Ardap
CN Arrivo
CN Asymmethrin
CN Barricade
CN Barricade (insecticide)
CN Barricade 10EC
CN Basathrin
CN Beta-cypermethrin

CN CCN 52
CN Chinimix
CN Chinmix
CN cis-Cypermethrin
CN Colt
CN Creokhin
CN Cymbush
CN Cympa-Ti
CN Cymperator
CN Cyperco
CN Cyperil
CN Cyperkill
CN Cypermethrin
CN Cypor
CN Demon
CN Demon TC
CN Drago
CN Ectomin
CN Ectopor
CN Excis
CN EXP 5598
CN Fenom
CN Fenom (pesticide)
CN FMC 30980
CN FMC 45497
CN FMC 45806
CN Fury
CN Hilcyperin
CN JF 5705F
CN Kordon
CN Kreokhin
CN Mustang
CN Neramethrin
CN Neramethrin EC 50
CN NRDC 149
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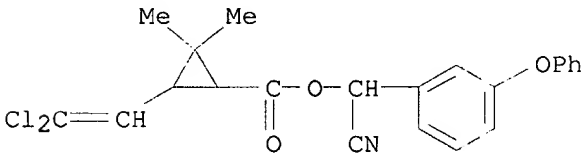

3296 REFERENCES IN FILE CA (1967 TO DATE)
60 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
3300 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 134:167899

REFERENCE 2: 134:158662

REFERENCE 3: 134:143283

REFERENCE 4: 134:143252

REFERENCE 5: 134:143054

REFERENCE 6: 134:130564

REFERENCE 7: 134:130559

REFERENCE 8: 134:130558

REFERENCE 9: 134:127294

REFERENCE 10: 134:127256

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SEARCH REQUEST FORM

Date: 3-14-01 Requester's Full Name: Allen J. Robinson Examiner #: 61319
Art Unit: 1616 Phone (308) 4524 Serial Number: 09/727,117
Results Format Preferred (circle): (PAPER) DISK E-MAIL

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To ensure an efficient and quality search, please attach a copy of the cover sheet, claims, and abstract or fill out the following:

Title of Invention: Compositions for enhanced acaricidal activity

Inventors (please provide full names): Robert G. Arthur

Earliest Priority Date: 11-30-00

Search Topic:
Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known.

For Sequence Searches Only *Please include all pertinent information (parent, grandchild, divisional, or issued patent numbers) along with the appropriate serial number.*

Combination of

a) permethrin

and

b) imidacloprid

dermal control of parasitic insects and acarids

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___ Structure (#)
___ Bibliographic
___ Litigation
___ Fulltext
___ Other

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Date: 3-14-01 Requester's Full Name: Allen J. Robinson

Art Unit: 1616 Phone (308) 4524 Examiner #: 61319

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